



Serial No. 09/591,531

RD-27817

APR 28 2003  
Response  
#12  
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Typed or printed name: RITA M. LYNCH

Signature: Rita M. Lynch

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: L.B. Kool et al.

: Group Art Unit: 2825

Serial No.: 09/591,531

: Examiner: I.U. Anya

Filed: June 9, 2000

: Response to Paper No. 11

For: Method for Removing a Coating from a Substrate,  
And Related Compositions

**RESPONSE AFTER FINAL REJECTION**

Assistant Director of Patents and Trademarks  
United States Patent and Trademark Office  
Washington, DC 20231

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Sir:

Applicants appreciate the consideration shown by the Office, as evidenced by the Office Action, mailed on January 29, 2003. In that Office Action, the Examiner rejected claims 1-22, 34-37, and 42-48. Applicants respectfully request reconsideration of the application by the Examiner in light of the following remarks offered in response to the Office Action.

**1. Rejection under Nagaei et al.**

Claims 1, 2, 5, 6, 9, 10, 12, 13, 15, 17, 18, 19, 22, 34, and 36 were rejected under 35 U.S.C. 102(b) as being anticipated by Nagaei et al. (Abstract of JP Patent Number 6096083). Applicants respectfully traverse this rejection because this reference does not teach, suggest, or disclose all of the limitations of the present claims under rejection.

The Examiner reminds Applicants "patentability is on claims and not specification." Applicants agree with this general proposition, but respectfully emphasize that the U.S. Court of Appeals for the Federal Circuit has consistently held that "[w]hen the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art." MPEP §2173.05(a), citing In re Zletz, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989). The specification therefore may be properly used to define the scope of specific terms recited in a claim, as Applicants have done here.

As noted in previous prosecution, independent claims 1 and 34 of the present application recite in part "contacting at least one of a diffusion coating and an overlay coating." Page 1 of the present specification states the meaning that the terms "diffusion coating" and "overlay coating" are intended to have in the present application. For example, both coatings are described as classes of "advanced oxidation-resistant coatings...required for environmental protection, as well as improved thermal barrier coating life...used on components in gas turbine hot sections." Page 1, lines 8-10. Further, "[d]iffusion coatings are formed by depositing constituent components of the coating, and reacting those components with elements from the underlying substrate, to form the coating by high temperature diffusion," while "overlay coatings are generally deposited intact, without reaction with the underlying substrate." Page 1, lines 18-21. In short, the terms "diffusion coatings" and "overlay coatings" recited in claims 1 and 34, properly read in light of the specification per the MPEP and Federal Circuit, are clearly intended to mean two classes of advanced oxidation-resistant coatings that are deposited on substrates for environmental protection, improved thermal barrier coating life, and the like.

In sharp contrast to the present application, Nagaei et al. describes the use of a weak acid solution on an aluminum article to remove metal powder, oil, and grease from the surface of the article without etching the article. These undesirable residues are deposited on the surface of the metal as by-products during working or annealing. The Examiner's comment that the accumulation of by-products may be formed during an annealing step ("a high temperature oxidation") does not address the fact that regardless of how it is formed, the accumulation does not result in an overlay coating within the scope of the present claims at issue. This accumulation of by-products is not an "overlay coating" within the scope of claims 1 and 34 of the present application, because accumulations of powder and grease are

not advanced oxidation-resistant coatings that are deposited on substrates for environmental protection, improved thermal barrier coating life, and the like. As Nagaei et al. fails to describe the limitation of "contacting at least one of a diffusion coating and an overlay coating," recited in claims 1 and 34 of the present application, Applicants respectfully submit that Nagaei et al. does not anticipate claim 1; its dependent claims 2, 5, 6, 9, 10, 12, 13, 15, 17, 18, 19, 22; independent claim 34; and its dependent claim 36.

Furthermore, previous prosecution has set forth Applicants' arguments as to the non-obviousness of the present application in light of Nagaei et al. These arguments remain operative in this Response. In particular, the fact that Nagaei et al. describe a very weak acid (pH 4-6) that does not "spoil or etch the Al surface," used to remove a mere accumulation of processing by-product, would not motivate one skilled in the art to use Nagaei's process to remove an overlay coating or a diffusion coating as recited in present claims 1 and 34. The fact that the solution does not etch aluminum would clearly signal to one skilled in the art that this process would not effectively remove an advanced overlay or diffusion coating of the type within the scope of the terms recited in the claims at issue, due to their inherently high environmental resistance. For this and other reasons previously argued, Applicants respectfully submit that claims 1, 34, and their respective dependent claims are patentably distinct from Nagaei et al.

## **2. Rejection under Nagaei et al. in view of O'Brien**

Claims 7 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaei et al. (JP Patent Number 56096083) in view of O'Brien (US Patent Number 5,817,182). Applicants respectfully submit that because these claims depend from claim 1, which Applicants believe to be allowable for the reasons described above, claims 7 and 8 are allowable over the cited references. Applicants respectfully request reconsideration of this rejection.

## **3. Rejection under Nagaei et al. in view of Matsukawa**

Claims 3, 4, 11, 14, 16, 20, 21, 35, 37, 42 to 48 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaei et al. (JP Patent Number 56096083) in view of Matsukawa (US Patent Number 59621 45). Applicants respectfully traverse this rejection.

As to the claims 3, 4, 11, 14, 16, 20, 21, 35, 37, each of these claims depends from either claim 1 or claim 34, and is thus believed to be patentable due to dependency from an allowable independent claim.

As to independent claim 42 and its dependent claims, if the rejection of these claims is the only outstanding issue preventing allowance of the application, Applicants would be willing to discuss with the Examiner the possibility of canceling these claims in order to expedite the issuance of the remaining allowable claims.

Notwithstanding the above, Applicants maintain their position, described in detail in previous prosecution, that the combination of Nagaei et al. with Matsukawa is not proper to make a *prima facie* case of obviousness. In short, Matsukawa describes a process that etches aluminum and deposits a nonmetallic passive layer on the etched surface, whereas Nagaei et al. describes the precisely opposite process of removing passive layers and accumulated by-products without etching the aluminum. Applicants have contended previously that such diametrically opposed teachings cannot be properly combined to make a case for obviousness.

The Examiner reminds Applicants "the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981)." Applicants agree with this proposition, and respectfully submit that their argument regarding the improper combination is valid in light of the Examiner's statement.

"If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP §2143.01 citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Here, the primary process (Nagaei et al) removes passive layers (among other things) from the surface of an aluminum substrate without etching the aluminum, and the proposed modification (Matsukawa) is to use a solution from a second process that etches aluminum and deposits a passive layer on the surface, precisely opposite of what is supposed to occur in the primary process. The proposed modification of the non-etching layer removal process of Nagaei et al. through the use of Matsukawa's etching and

layer deposition process would clearly render the process of Nagaei et al. unsatisfactory for its intended purpose of removing passive layers without etching aluminum, because Matsukawa describes that aluminum is etched and a passive layer is deposited. Therefore, there is no suggestion or motivation in this combination to make the proposed modification, and without such motivation or suggestion, the claims at issue cannot be obvious in light of the applied combination of references.

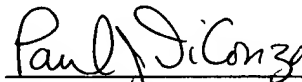
Applicants therefore respectfully submit that claim 42 and its dependent claims 43-48 are patentably distinct from the Nagaei et al/Matsukawa combination.

#### 4. Allowable Claims

Applicants appreciatively acknowledge the Examiner's statement as to the allowability of claims 24-33 and 38-41. Applicants respectfully request reconsideration of the objection to these claims, as Applicants believe the claims from which they depend are allowable for the reasons described herein.

In light of the remarks presented herein, Applicants submit that the case is in condition for immediate allowance and respectfully requests such action. If, however, any issues remain unresolved, the Examiner is invited to telephone the undersigned at the number provided below.

Respectfully submitted,



Paul DiConza  
Reg. No. 48,418  
General Electric Company  
Building K1, Room 3A60  
Telephone: (518) 387-6131

Schenectady, New York  
26 March 2003